

US EPA ARCHIVE DOCUMENT

MEMORANDUM

DATE: 2/23/99

SUBJECT: **Avermectin.** Acute and Chronic Dietary Risk Analysis for the Request for Tolerances on Grapes and Peppers and Section 18 on Avocados.

DP Barcode: D252974	PRAT Case#: 288940
PC Code: 122804	Caswell#: 063AB
Trade Name: AGRI-MEK	EPA Reg#: 618-98
Class: Insecticide	40 CFR: §180.449
MRID: None	

FROM: William D. Cutchin, Chemist
Registration Action Branch 2
Health Effects Division (7509C)

THRU: Richard Loranger, Branch Senior Scientist
Registration Action Branch 2
Health Effects Division (7509C)

TO: Tina Levine, Chief
Insecticide Rodenticide Branch
Registration Division (7505C)

Action Requested

Provide an acute and chronic Dietary Exposure Evaluation Model (DEEM) analysis for the proposed tolerances for avermectin tolerances [combined residues of avermectin (also referred to as abamectin) ($\leq 80\%$ avermectin B1a (5-O-demethyl avermectin A_{1a}) and $\geq 20\%$ avermectin B1b (5-O-demethyl-25-de (1-methylpropyl)-25-(1-methylethyl) avermectin A_{1a})) and its delta-8,9-isomer] on peppers and grapes at 0.02 ppm as a result of the Section 3 request (PP7F4844) and on avocados at 0.02 ppm as a result of the Section 18 request (99CA008).

Toxicological Endpoints

Acute

Acute dietary Reference Dose (aRfD) of 0.0025 mg/kg from a 1-year dog study. The NOAEL is 0.25 mg/kg/day, and the LOAEL is 0.50 mg/kg/day based on mydriasis (pupil dilation) which was observed after one week of dosing. An uncertainty factor of 100 to account for interspecies extrapolation (10x) and intraspecies variability(10x) was recommended (Hazard Identification

Assessment Review Committee (HIARC), 7/28/98).

Chronic

Chronic dietary RfD of 0.0012 mg/kg/day from a 2-generation reproduction study in rats. The developmental NOAEL is 0.12 mg/kg/day, and the developmental LOAEL is 0.40 mg/kg/day based on decreased pup body weight and viability during lactation, and increased incidence of retinal rosettes in F_{2b} weanlings. An uncertainty factor of 100 to account for interspecies extrapolation (10x) and intraspecies variability(10x) was recommended (HIARC, 7/28/98).

Cancer

At its July 27, 1996 meeting, the HED RfD/Peer Review Committee classified avermectin as a Cancer Group E chemical based on the absence of significant tumor increases in two adequate rodent carcinogenicity studies. On July 28, 1998 the HIARC retained this classification. This assessment is not required.

FQPA Safety Factor

The FQPA Safety Factor Committee met on August 31, 1998 to evaluate the hazard and exposure data for avermectin and recommend application of the FQPA Safety Factor (as required by Food Quality Protection Act of August 3, 1996), to ensure the protection of infants and children from exposure to this pesticide. The Committee recommended that the 10-fold safety factor for increased susceptibility of infants and children be retained for this pesticide and applied to all population subgroups for acute and chronic exposure (B. Tarplee, 9/11/98)

As a result of the retention of the FQPA Safety Factor, HED will consider the population adjusted doses (PAD) for females 13+, infants, and children to be 0.00025 and 0.00012 mg/kg/day for acute and chronic exposure, respectively. For other populations (i.e., adult males), exposures will be compared to the acute and chronic RfDs, 0.0025 and 0.0012 mg/kg/day, respectively.

Residue Information

Numerous commodities have avermectin tolerances including time-limited tolerances (40 CFR: §180.449). Anticipated residue (PP#9F3787, DP Barcode: D207554, J. Herndon, 12/20/94; PP#4F04345, DP Barcodes: D201328 and D201333, CBTS#: 13512 and 13513, J. Herndon, 5/1/95; and DP Barcode: D252609, W. Cutchin, 2/8/99) and percent crop treated (%CT) data were available (BEAD, D. Herzi, 11/98) for this analysis.

Results

Acute Exposure Analysis

The registrant has submitted an acute dietary exposure assessment using probabilistic "Monte

Carlo" modeling incorporating anticipated residue and percent of crop treated refinements (MRID: 443000-04) to calculate the Anticipated Residue Contribution (ARC). HED has examined the assumptions made in conducting the analysis and the following residue files: celery, strawberry, citrus, tomato, and pear (PP#9F3787, DP Barcode: D207554, J. Herndon, 12/20/94), apple, (PP#4F04345, DP Barcodes: D201328 and D201333, CBTS#: 13512 and 13513, J. Herndon, 5/1/95), grape (PP# 7F4844, DP Barcode: D238327, W. Cutchin, 9/18/98) and pepper (PP# 7F4844, DP Barcode: D238327, W. Cutchin, 9/18/98 and PP#3F04258, DP Barcode D194897, D198987; CBTS# 12519, 13174; MRID 429000-00, -01; M. Peters, 5/17/94), and found the analysis adequate with the exception of the acute RfD; the analysis was not conducted with the current acute population adjusted dose (PAD) of 0.00025 mg/kg/day. Residue data files (rdf) and % crop treated (CT) were used on all but a few low consumption food items. Reduction factors for fractionation and processing were utilized for citrus and pome fruit. Monitoring data were not used for mixed/blended commodities.

HED was able to further refine the acute dietary estimate by using updated %CT data provided by BEAD (Attachment 1), resetting the processing factor for dried potatoes to 1 which reflects the non-concentration of avermectin in potato processed commodities, correcting the residue files above to use $\frac{1}{2}$ the limit of detection (LOD) and $\frac{1}{2}$ limit of quantitation (LOQ) where appropriate, and using the anticipated residue levels and previously established processing factors for blended commodities (PP#9F3787, DP Barcode: D207554, J. Herndon, 12/20/94; PP#4F04345, DP Barcodes: D201328 and D201333, CBTS#: 13512 and 13513, J. Herndon, 5/1/95; and DP Barcode: D252609, W. Cutchin, 2/8/99). In addition, the analysis included residues in pear juice for which no data has been previously required. Since all other juices show reductions in avermectin residues from the raw agricultural commodity, HED will use the reduction factor previously calculated for apples in the analysis. Some of the resulting high-end exposure estimates are listed below. A complete listing of the acute analysis file, residue data files (.rdf), and probabilistic analysis are included as Attachments 2, 3, and 4, respectively.

The resulting calculations are presented below as either a percent of the acute PAD (%PAD) at the 99.9th percentile or percent aRfD (%aRfD) depending on the population. The risk estimate should be viewed as highly refined. Additional refinement of the almond, basil, cottonseed, hops and walnut residue estimates using RDF's and %CT would be unlikely to reduce risk estimates significantly. In making a safety determination for this tolerance, HED is taking into account this refined exposure assessment. HED is generally concerned with acute exposures that exceed 100% of the aRfD/PAD.

<u>Subgroup</u>	<u>ARC (mg/kg)</u>	
U.S. Population	0.000086	35 %PAD
Children (1-6 years)	0.000176	70 %PAD
Females (13+/nursing)	0.000095	38 %PAD
Males (13-19 years)	0.000048	2 %aRfD

Chronic Exposure Analysis

In conducting this chronic dietary risk assessment, HED has made somewhat conservative assumptions -- anticipated residues (PP#9F3787, DP Barcode: D207554, J. Herndon, 12/20/94), and percent crop-treated data were used for selected crops -- which result in an overestimate of human dietary exposure. This chronic dietary (food only) exposure should be viewed as a partially refined risk estimate; further refinement using additional percent crop-treated values would result in a lower dietary exposure estimate. Thus, in making a safety determination for this tolerance, EPA is taking into account this partially refined exposure assessment. HED is generally concerned with chronic exposures that exceed 100% of the chronic RfD/PAD. A complete listing of the chronic analysis file and analysis are included as Attachments 5 and 6, respectively.

The existing avermectin tolerances (published, pending and new) result in an ARC that is equivalent to the following percentages of the RfD or PAD depending on the subpopulation:

<u>Subgroup</u>	<u>ARC_{FOOD}</u>	
U.S. Population	0.000008	7 %PAD
Non-nursing infants (<1 year)	0.000023	19 %PAD
Females (13+/nursing)	0.000008	6 %PAD
Males (20+ years)	0.000008	<1 %RfD

Conclusions

The acute analysis for avermectin is a refined estimate of dietary exposure with all anticipated residues, %CT data, and a probabilistic analysis. Additional refinements would not significantly reduce the risk estimate. The risk from acute dietary exposure to avermectin, as represented by the %aRfD/PAD, does not exceed HED's level of concern for any of the DEEM population subgroups.

The chronic analysis for avermectin is a partially refined estimate of dietary exposure with some anticipated residues and percent crop treated data. Even without further refinements, the risk from chronic dietary exposure to avermectin, as represented by the %RfD, is not above HED's level of concern for any of the DEEM subgroups.

Attachments: 1, 2, 3, 4, 5, 6

cc: DRES SAC (L. Richardson), RAB2 Reading File

RDI:DRES SAC(W. Donovan):2/17/99:BSS(R. Loranger):2/19/99

Attachment 1

Abamectin Case #:71751-41-2 AI#:122804
November 1998

Quantitative Usage Analysis

Analyst: Dhol Herzl

Site	Acres Grown (000)	Acres Treated (000)			% of Crop Treated			LB AI Applied (000)			Average Application Rate		% of total lb ai used on this site
		Wtd Avg	Est Max	Wtd Avg	Est Max	Wtd Avg	Est Max	lb ai/ acre/yr	#appl / yr	lb ai/ A/appl			
Berries	161	14	29	8.9%	17.8%	1	2	0.1	2.8	0.0	CA	100%	
Strawberries	50	21	23	41.8%	46.4%	1	1	0.0	2.3	0.0	CA	84%	
Citrus, Other	51	16	32	31.9%	63.2%	0	0	0.0	1.4	0.0	AZ	100%	
Grapefruit	194	88	118	45.5%	60.9%	1	2	0.0	1.2	0.0	FL	83%	
Lemons	63	11	22	17.2%	34.4%	0	0	0.0	1.3	0.0	FL	CA 100%	
Oranges	867	245	315	28.3%	36.3%	2	5	0.0	1.1	0.0	FL	AZ 89%	
Temples	7	5	7	63.8%	100.0	0	0	0.0	1.3	0.0			
Tangelos	12	7	12	56.9%	100.0	0	0	0.0	1.3	0.0	FL	100%	
Tangerines	26	14	19	53.0%	74.5%	0	0	0.0	1.4	0.0	FL	100%	
Apples	572	11	35	1.9%	6.1%	1	2	0.1	1.4	0.0	WA MI CA ID IN MA	77	
Pears	78	44	58	56.0%	74.3%	1	2	0.0	1.1	0.0	WA CA OR CO PA	84%	
Stone Fruits	40	0	1	0.9%	3.2%	0	1	0.7	1.0	0.7	MI PA	100%	
Cherries	128	0	0	0.0%	0.2%	0	0	1.0	1.0	1.0	MI	100%	

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Peaches	212	0	0	0.1%	0.2%	0	0	0.6	1.0	0.6 MI PA 100%
Grapes	825	0	2	0.1%	0.2%	0	0	0.1	1.6	0.0 CA 100%
Vegetables, All	3899	58	136	1.5%	3.5%	1	3	0.0	2.0	0.0 CA FL 91%
Eggplant/Peppers	119	8	18	6.3%	15.2%	0	0	0.0	1.2	0.0 FL TX 100%
Vegetables, Leafy	336	30	59	8.9%	17.6%	1	1	0.0	1.8	0.0 CA FL 100%
Celery	35	17	21	49.4%	60.0%	0	1	0.0	1.7	0.0 FL CA 100%
Lettuce	268	22	50	8.3%	18.5%	0	1	0.0	1.7	0.0 CA AZ 89%
Lettuce, Head	204	45	57	21.8%	28.0%	0	1	0.0	1.2	0.0 CA 82%
Melons/Coles/ Cucurbitss	48	15	48	31.3%	100.0%	1	3	0.1	2.4	0.0 CA 100%
Melons	368	5	17	1.3%	4.7%	0	1	0.0	3.4	0.0 CA 100%
Vegetables, Other	286	27	48	9.6%	16.8%	1	2	0.0	1.9	0.0 CA FL 100%
Potatoes	1421	4	66	0.3%	4.6%	0	4	0.1	1.5	0.0 ME 100%
Tomatoes	500	18	41	3.7%	8.1%	0	1	0.0	2.6	0.0 FL 100%
Tomatoes, Fresh	116	28	46	24.4%	39.6%	1	1	0.0	2.5	0.0 FL 100%
Cotton	12429	396	602	3.2%	4.8%	4	6	0.0	1.1	0.0 CA 97%
Hops	40	33	40	84.0%	100.0%	1	2	0.0	1.0	0.0 WA 84%
Lots/Farmsteads/e tc	24815	0	993	0.0%	4.0%	0	919	0.9	1.4	0.7 FL 100%
Total		1184	2916			19	961			

COLUMN HEADINGS

Wtd Avg = Weighted average--the most recent years and more reliable data are weighted more heavily.

Est Max = Estimated maximum, which is estimated from available data.

Average application rates are calculated from the weighted averages.

NOTES ON TABLE DATA

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Usage data primarily covers 1987 - 1996. Calculations of the above numbers may not appear to agree because they are displayed as rounded

to the nearest 1000 for acres treated or lb. a.i.

(Therefore 0 = < 500)
to the nearest whole percentage point for % of crop treated.

(Therefore 0% = < 0.5%)

0* = Available EPA sources indicate that no usage is observed in the reported data for this site,
which implies that there is little or no usage.

SOURCES: EPA data, USDA, and National Center for Food and Agricultural Policy

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Attachment 2

FILENAME: C:\Novigen\resdata\122804c\122804a2.R91
 CHEMICAL NAME: Avermectin
 RfD(CHRONIC): .000120 mg/kg/DAY NOEL(CHRONIC): .000000 mg/kg/day
 RfD(ACUTE): .000250 mg/kg/DAY NOEL(ACUTE): .000000 mg/kg/day Q*=.0000
 Date created/last modified: 02-02-1999/15:44:22/8 Program ver. 6.16

RDF indices and file names for Monte Carlo Analysis

1 C:\novigen\resdata\122804c\apple.rdf
 2 C:\novigen\resdata\122804c\Cantalou.rdf
 3 C:\novigen\resdata\122804c\Celery.rdf
 4 C:\novigen\resdata\122804c\Citrus.rdf
 5 C:\novigen\resdata\122804c\Cucum.rdf
 6 C:\novigen\resdata\122804c\Grape.rdf
 7 C:\novigen\resdata\122804c\Lettuce.rdf
 8 C:\novigen\resdata\122804c\Pear.rdf
 9 C:\novigen\resdata\122804c\Pepper.rdf
 10 C:\novigen\resdata\122804c\Potato.rdf
 11 C:\novigen\resdata\122804c\Spincach.rdf
 12 C:\novigen\resdata\122804c\Squash.rdf
 13 C:\novigen\resdata\122804c\Strawber.rdf
 14 C:\novigen\resdata\122804c\Tomato.rdf
 15 C:\novigen\resdata\122804c\Watermel.rdf

Food	Crop		RESIDUE	RDF	Adj. Factors	Comment
Code	Grp	Food Name	(ppm)	#	#1	#2
040	R	ALMONDS	000.005000	01.000	01.000	1F397
		Full comment: 1F3973				
377	L	APPLES-JUICE-CONCENTRATE	000.002800	00.219	00.061	4F434
		Full comment: 4F4345				
053	L	APPLES-DRIED	000.002800	04.400	00.061	4F434
		Full comment: 4F4345				
054	L	APPLES-JUICE/CIDER	000.002800	00.073	00.061	4F434
		Full comment: 4F4345				
052	L	APPLES	000.002800	1	01.000	01.000
		Full comment: 4F4345				
		11-Uncooked	000.002800	1	01.000	01.000
		Full comment: 4F4345				
		12-Cooked: NFS	000.002800	1	01.000	01.000
		Full comment: 4F4345				
		13-Baked	000.002800	1	01.000	01.000
		Full comment: 4F4345				
		14-Boiled	000.002800	1	01.000	01.000
		Full comment: 4F4345				
		15-Fried	000.002800	1	01.000	01.000
		Full comment: 4F4345				
		31-Canned: NFS	000.002800	1	00.130	01.000
		Full comment: 4F4345				
		32-Canned: Cooked	000.002800	1	00.130	01.000
		Full comment: 4F4345				
		33-Canned: Baked	000.002800	1	00.130	01.000
		Full comment: 4F4345				
		34-Canned: Boiled	000.002800	1	00.130	01.000
		Full comment: 4F4345				
		41-Frozen: NFS	000.002800	1	01.000	01.000
		Full comment: 4F4345				
		42-Frozen: Cooked	000.002800	1	01.000	01.000
		Full comment: 4F4345				
		51-Cured: NFS (incl. smoked/pickled/salted)	000.002800	1	01.000	01.000
		Full comment: 4F4345				
070	A	AVOCADOS	000.020000	01.000	01.000	99CA0
		Full comment: 99CA008				
116	S	BASIL	000.050000	01.000	01.000	exp 9/
		Full comment: exp 9/30/98 97CA057				
324	U	BEEF-FAT W/O BONES	000.006200	01.000	01.000	exp 9/
		Full comment: exp 9/99 8F3592				

325	U BEEF-KIDNEY		000.002100	01.000 01.000 exp 9/
	Full comment: exp 9/99 8F3592			
326	U BEEF-LIVER		000.009900	01.000 01.000 exp 9/
	Full comment: exp 9/99 8F3592			
327	U BEEF-LEAN(FAT/FREE)W/O BONES		000.001000	01.000 01.000 exp 9/
	Full comment: exp 9/99 8F3592			
322	U BEEF-OTHER ORGAN MEATS		000.009900	01.000 01.000 exp 9/
	Full comment: exp 9/99 8F3592			
323	U BEEF-DRIED		000.001000	01.000 01.000 exp 9/
	Full comment: exp 9/99 8F3592			
321	U BEEF-MEAT BYPRODUCTS		000.008000	01.000 01.000 exp 9/
	Full comment: exp 9/99 8F3592			
152	J BITTER MELON		000.001300	2 01.000 01.000 4F435
	Full comment: 4F4354			
143	J CASABAS		000.001300	15 01.000 01.000 4F435
	Full comment: 4F4354			
199	B CELERIAC		000.001100	01.000 01.000 exp 1/
	Full comment: exp 1/31/00 97CA027			
384	E CELERY JUICE		000.010200	01.000 00.600 8F36
	Full comment: 8F3649			
166	E CELERY		000.010200	3 01.000 01.000 8F36
	Full comment: 8F3649			
386	J CHRISTOPHINE		000.001300	15 01.000 01.000 4F435
	Full comment: 4F4354			
020	K CITRUS CITRON		000.002500	4 01.000 01.000 exp 9
	Full comment: exp 9/99 8F3592			
290	A COTTONSEED-OIL		000.000630	01.000 00.048 exp 9/
	Full comment: exp 9/99 8F3592			
291	A COTTONSEED-MEAL		000.005000	01.000 00.048 exp 9/
	Full comment: exp 9/99 8F3592			
144	J CRENSHAW'S		000.001300	15 01.000 01.000 4F435
	Full comment: 4F4354			
148	J CUCUMBERS		000.001300	5 01.000 01.000 4F435
	Full comment: 4F4354			
179	S FENNEL		000.011000	01.000 01.000 8F364
	Full comment: 8F3649			
023	K GRAPEFRUIT-JUICE		000.002500	00.850 00.609 exp 9
	Full comment: exp 9/99 8F3592			
448	K GRAPEFRUIT PEEL		000.002500	02.500 00.609 exp 9
	Full comment: exp 9/99 8F3592			
441	K GRAPEFRUIT-JUICE-CONCENTRATE		000.002500	03.430 00.609 exp 9
	Full comment: exp 9/99 8F3592			
022	K GRAPEFRUIT-PEELED FRUIT		000.002500	4 01.000 01.000 exp 9
	Full comment: exp 9/99 8F3592			
392	A GRAPES-JUICE-CONCENTRATE		000.002700	01.410 00.002 7F484
	Full comment: 7F4844			
315	A GRAPES-WINE AND SHERRY		000.002700	00.470 00.002 7F484
	Full comment: 7F4844			
195	A GRAPES-LEAVES		000.002700	01.000 00.002 7F484
	Full comment: 7F4844			
015	A GRAPES-JUICE		000.002700	00.470 00.002 7F484
	Full comment: 7F4844			
014	A GRAPES-RAISINS		000.002700	00.750 00.002 7F484
	Full comment: 7F4844			
013	A GRAPES		000.002700	6 01.000 01.000 7F484
	Full comment: 7F4844			
125	A HOPS		000.500000	01.000 01.000 exp 9/
	Full comment: exp 9/1/99 4E4419			
024	K KUMQUATS		000.002500	4 01.000 01.000 exp 9
	Full comment: exp 9/99 8F3592			
442	K LEMONS-JUICE-CONCENTRATE		000.002500	01.425 00.344 exp 9
	Full comment: exp 9/99 8F3592			
026	K LEMONS-PEELED FRUIT		000.002500	4 01.000 01.000 exp 9
	Full comment: exp 9/99 8F3592			
027	K LEMONS-PEEL		000.002500	02.500 00.344 exp 9
	Full comment: exp 9/99 8F3592			
028	K LEMONS-JUICE		000.002500	00.250 00.344 exp 9
	Full comment: exp 9/99 8F3592			
176	E LETTUCE-LEAFY VARIETIES		000.009000	7 01.000 01.000 4F437
	Full comment: 4F4373			
192	E LETTUCE-HEAD VARIETIES		000.009000	7 01.000 01.000 4F437

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Full comment: 4F4373				
182 E LETTUCE-UNSPECIFIED	000.009000	7	01.000 01.000	4F437
Full comment: 4F4373				
032 K LIMES-JUICE	000.002500		00.250 00.632	exp 9
Full comment: exp 9/99 8F3592				
030 K LIMES-PEELED FRUIT	000.002500	4	01.000 01.000	exp 9
Full comment: exp 9/99 8F3592				
443 K LIMES-JUICE-CONCENTRATE	000.002500		00.750 00.632	exp 9
Full comment: exp 9/99 8F3592				
031 K LIMES-PEEL	000.002500		02.500 00.632	exp 9
Full comment: exp 9/99 8F3592				
146 J MELONS-PERSIAN	000.001300	2	01.000 01.000	4F435
Full comment: 4F4354				
145 J MELONS-HONEYDEW	000.001300	2	01.000 01.000	4F435
Full comment: 4F4354				
141 J MELONS-CANTALOUPE-JUICE	000.001300	2	01.000 01.000	4F435
Full comment: 4F4354				
142 J MELONS-CANTALOUPE-PULP	000.001300	2	01.000 01.000	4F435
Full comment: 4F4354				
319 X MILK-FAT SOLIDS	000.000200		01.000 01.000	exp 9/
Full comment: exp 9/99 8F3592				
320 X MILK SUGAR (LACTOSE)	000.000200		01.000 01.000	exp 9/
Full comment: exp 9/99 8F3592				
318 X MILK-NONFAT SOLIDS	000.000200		01.000 01.000	exp 9/
Full comment: exp 9/99 8F3592				
033 K ORANGES-JUICE-CONCENTRATE	000.002500		00.930 00.363	exp 9
Full comment: exp 9/99 8F3592				
035 K ORANGES-PEEL	000.002500		02.500 00.363	exp 9
Full comment: exp 9/99 8F3592				
034 K ORANGES-PEELED FRUIT	000.002500	4	01.000 01.000	exp 9
Full comment: exp 9/99 8F3592				
036 K ORANGES-JUICE	000.002500		00.250 00.363	exp 9
Full comment: exp 9/99 8F3592				
139 I PAPRIKA	000.020000	9	01.000 01.000	7F484
Full comment: 7F4844				
404 L PEARS-JUICE	000.007100		00.073 00.743	1F378
Full comment: 1F3787				
057 L PEARS-DRIED	000.007100		04.400 00.743	1F378
Full comment: 1F3787				
056 L PEARS	000.007100	8	01.000 01.000	1F378
Full comment: 1F3787				
11-Uncooked	000.007100	8	01.000 01.000	1F378
Full comment: 1F3787				
12-Cooked: NFS	000.007100	8	01.000 01.000	1F378
Full comment: 1F3787				
13-Baked	000.007100	8	01.000 01.000	1F378
Full comment: 1F3787				
14-Boiled	000.007100	8	01.000 01.000	1F378
Full comment: 1F3787				
31-Canned: NFS	000.008000	8	00.040 01.000	1F378
Full comment: 1F3787				
156 I PEPPERS-CHILLI INCL JALAPENO	000.020000	9	01.000 01.000	7F484
Full comment: 7F4844				
157 I PEPPERS-OTHER	000.020000	9	01.000 01.000	7F484
Full comment: 7F4844				
155 I PEPPERS-SWEET(GARDEN)	000.020000	9	01.000 01.000	7F484
Full comment: 7F4844				
158 I PIMENTOS	000.020000	9	01.000 01.000	1E394
Full comment: 1E3943				
211 B POTATOES/WHITE-PEEL ONLY	000.000250	10	01.000 01.000	exp 9/
Full comment: exp 9/1/99 5F4508				
208 B POTATOES/WHITE-UNSPECIFIED	000.002000	10	01.000 01.000	exp 9/
Full comment: exp 9/1/99 5F4508				
207 B POTATOES/WHITE-WHOLE	000.000250	10	01.000 01.000	exp 9/
Full comment: exp 9/1/99 5F4508				
209 B POTATOES/WHITE-PEELED	000.000250	10	01.000 01.000	exp 9/
Full comment: exp 9/1/99 5F4508				
210 B POTATOES/WHITE-DRY	000.001200	10	01.000 01.000	exp 9/
Full comment: exp 9/1/99 5F4508				
149 J PUMPKIN	000.001300	12	01.000 01.000	4F435
Full comment: 4F4354				

10

186	E SPINACH	000.050000	11	01.000	01.000	exp 1/
	Full comment: exp 1/31/00 97CA005					
415	J SQUASH-SPAGHETTI	000.001300	12	01.000	01.000	4F435
	Full comment: 4F4354					
151	J SQUASH-WINTER	000.001300	12	01.000	01.000	4F435
	Full comment: 4F4354					
150	J SQUASH-SUMMER	000.001300	12	01.000	01.000	4F435
	Full comment: 4F4354					
416	A STRAWBERRIES-JUICE	000.004000		01.000	00.464	0F388
	Full comment: 0F3880					
017	A STRAWBERRIES	000.004000	13	01.000	01.000	0F388
	Full comment: 0F3880					
037	K TANGELOS	000.002500	4	01.000	01.000	exp 9
	Full comment: exp 9/99 8F3592					
420	K TANGERINES-JUICE-CONCENTRATE	000.002500		00.800	00.743	exp 9
	Full comment: exp 9/99 8F3592					
039	K TANGERINES-JUICE	000.002500		00.250	00.743	exp 9
	Full comment: exp 9/99 8F3592					
038	K TANGERINES	000.002500	4	01.000	01.000	exp 9
	Full comment: exp 9/99 8F3592					
159	I TOMATOES-WHOLE	000.002000	14	01.000	01.000	1E394
	Full comment: 1E3943					
423	I TOMATOES-DRIED	000.002000		14.300	00.080	1E394
	Full comment: 1E3943					
160	I TOMATOES-JUICE	000.002000		00.210	00.080	9F370
	Full comment: 9F3703					
162	I TOMATOES-PASTE	000.002000		01.200	00.080	9F370
	Full comment: 9F3703					
163	I TOMATOES-CATSUP	000.002000		01.100	00.080	9F370
	Full comment: 9F3703					
161	I TOMATOES-PUREE	000.002000		00.400	00.080	9F370
	Full comment: 9F3703					
153	J TOWELGOURD	000.001300	12	01.000	01.000	4F435
	Full comment: 4F4354					
431	R WALNUT OIL	000.005000		01.000	01.000	1F397
	Full comment: 1F3973					
048	R WALNUTS	000.005000		01.000	01.000	1F397
	Full comment: 1F3973					
436	J WATERMELON-JUICE	000.001900		01.000	00.050	4F435
	Full comment: 4F4354					
147	J WATERMELON	000.001300	15	01.000	01.000	4F435
	Full comment: 4F4354					
439	J WINTERMELON	000.001300	15	01.000	01.000	4F435
	Full comment: 4F4354					

/ \

Attachment 3

APPLES	0.002	0.0105
PERCENT CROP TX =	0.002	0.0157
6%	0.002	0.0183
TOTALZ = 517	0.0018	0.0116
TOTALNZ = 32	0.002	0.0076
0.0033	0.002	0.0088
0.00125	0.002	0.0092
0.00125	0.002	0.0031
0.000625	0.002	0.0082
0.0069	0.002	0.0066
0.0046	0.002	0.0067
0.0036	0.002	0.0381
0.0032	0.002	0.0097
0.00125	0.002	0.0175
0.000625	0.002	0.015
0.0034	0.002	0.0097
0.0025	0.002	0.0095
0.0029		0.0088
0.00125	CELERY	0.0089
0.011	PERCENT CROP TX =	0.0031
0.0086	60%	0.0031
0.000625	TOTALZ = 56	0.0031
0.000625	TOTALNZ = 84	0.0031
0.0074	0.0121	0.0031
0.005	0.0206	0.0031
0.0031	0.0082	0.0031
0.00125	0.0166	0.0031
0.00125	0.0031	0.0031
0.000625	0.0031	0.0031
0.000625	0.0031	0.007
0.000625	0.0031	0.0111
0.00125	0.0031	0.0316
0.000625	0.0074	0.0083
0.0042	0.0074	0.021
0.00125	0.0089	0.0082
0.0038	0.0031	0.0093
0.000625	0.0031	0.0092
	0.0031	0.0031
CANTALOUPE	0.0031	0.0192
PERCENT CROP TX =	0.0031	0.0121
5%	0.0073	0.0198
TOTALZ = 360	0.00125	0.0256
TOTALNZ = 18	0.0031	0.0256
0.0018	0.0098	0.0208

12

0.0267	0.00125	0.00125
0.0205	0.00125	0.00125
0.0231	0.00125	0.00125
0.0105	0.00125	0.0031
0.0098	0.00125	0.0031
0.0132	0.00125	0.004
0.0135	0.00125	0.0031
0.0066	0.00125	0.00125
0.0074	0.00125	0.00125
0.012	0.00125	0.00125
0.0128		0.00125
0.0085	CUCUMBERS	
0.0083	CROP PERCENT TX =	LETTUCE
0.0066	100%	CROP PERCENT TX =
0.0234	TOTALZ = 0	18%
0.0091	TOTALNZ = 8	TOTALZ = 419
0.0067	0.002	TOTALNZ = 92
0.0101	0.002	0.0020
0.0106	0.002	0.0020
CITRUS	0.002	0.0020
CROP PERCENT TX =	0.002	0.0020
43%	0.002	0.0020
TOTALZ = 40	0.0035	0.0020
TOTALNZ = 30		0.0020
0.00125	GRAPES	0.0020
0.00125	CROP PERCENT TX =	0.0020
0.00125	0.2%	0.0020
0.00125	TOTALZ = 12974	0.0020
0.0086	TOTALNZ = 26	0.0020
0.0083	0.0053	0.0020
0.0031	0.0063	0.0020
0.0031	0.0034	0.0020
0.0106	0.00125	0.0020
0.0117	0.00125	0.0020
0.00125	0.00125	0.0020
0.00125	0.00125	0.0020
0.00125	0.006	0.0020
0.00125	0.0077	0.0035
0.00125	0.0031	0.0151
0.00125	0.0037	0.0020
0.00125	0.00125	0.0020
0.00125	0.00125	0.0035
0.00125	0.00125	0.0166

0.0020	0.0020	0.00125
0.0020	0.0076	0.00125
0.0035	0.0253	0.0031
0.0170	0.0020	0.0031
0.0020	0.0020	0.0031
0.0020	0.0084	0.00125
0.0035	0.0277	0.0031
0.0176	0.0020	0.00125
0.0020	0.0035	0.00125
0.0020	0.0086	
0.0035	0.0310	POTATOES
0.0178	0.0020	CROP PERCENT TX =
0.0020	0.0035	5%
0.0020	0.0103	TOTALZ = 179
0.0035	0.0313	TOTALNZ = 9
0.0203	0.0020	0.002
0.0020	0.0035	0.002
0.0020	0.0148	0.002
0.0035	0.0321	0.002
0.0208		0.002
0.0020	PEARS	0.002
0.0020	CROP PERCENT TX =	0.002
0.0035	75%	0.002
0.0208	TOTALZ = 2	0.002
0.0020	TOTALNZ = 8	
0.0020	0.0044	SPINACH
0.0035	0.0039	CROP PERCENT TX =
0.0213	0.0053	18%
0.0020	0.0064	TOTALZ = 18
0.0020	0.0061	TOTALNZ = 4
0.0035	0.0099	0.009
0.0221	0.0116	0.009
0.0020	0.0088	0.028
0.0020		0.027
0.0063	PEPPERS	
0.0234	CROP PERCENT TX =	SUMMER SQUASH
0.0020	15%	CROP PERCENT TX =
0.0020	TOTALZ = 85	100%
0.0066	TOTALNZ = 15	TOTALZ = 0
0.0240	0.0031	TOTALNZ = 7
0.0020	0.0031	0.002
0.0020	0.0031	0.002
0.0071	0.0031	0.002
0.0248	0.00125	0.002
0.0020	0.00125	0.002

0.002	0.0067	0.00125
0.002	0.007	0.00125
	0.0082	0.00125
STRAWBERRY	0.00063	0.0031
CROP PERCENT TX =	0.00063	0.00125
47%	0.00063	0.00125
TOTALZ = 77	0.00063	0.00125
TOTALNZ = 68	0.00063	0.00125
0.00125	0.00063	0.00125
0.0062	0.00063	0.00125
0.00125	0.00063	0.00125
0.0093	0.0112	0.00125
0.00125	0.0089	0.00125
0.00125	0.0085	0.00125
0.0063	0.0086	0.00125
0.0072	0.00063	0.00125
0.0058	0.00063	0.00125
0.0061	0.00063	0.0064
0.0081	0.00063	0.0031
0.0089	0.00125	0.00125
0.0061	0.00125	0.0031
0.0061	0.00125	0.00125
0.0079	0.00125	0.00125
0.0074	0.00063	0.00125
0.00063	0.00063	0.00125
0.0083	0.00063	0.00125
0.009	0.00063	0.00125
0.0082	0.00125	0.0031
0.0055	0.00125	0.00125
0.0124	0.00125	0.00125
0.0095	0.0057	0.00125
0.0064		0.00125
0.0069	TOMATOES	0.00125
0.0061	CROP PERCENT TX =	0.00125
0.0076	8%	0.00125
0.0067	TOTALZ = 759	0.0031
0.0064	TOTALNZ = 66	0.0235
0.0056	0.00125	0.00125
0.008	0.00125	0.00125
0.0064	0.00125	0.00125
0.00063	0.00125	0.00125
0.00063	0.00125	0.00125
0.00063	0.00125	0.00125
0.00125	0.00125	0.00125

15

0.00125
0.00125
0.00125
0.00125
0.00125
0.0031
0.0077
0.00125
0.00125
0.00125
0.00125
0.00125
0.0031

WATERMELON

CROP PERCENT TX =

5%

TOTALZ = 76

TOTALNZ = 4

0.002

0.002

0.0018

0.0018

Attachment 4

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day
 MC iterations = 1000 MC list in residue file MC seed = 0
 =====

U.S. pop - all seasons Daily Exposure Analysis 1/
 (mg/kg body-weight/day)
 per Capita per User

 Mean 0.000005 0.000005
 Standard Deviation 0.000008 0.000009
 Percent of aRfD 2.16 2.18

Percent of Person-Days that are User-Days = 99.47%

Estimated percentile of user-days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.11	10.00	0.000012	4.97
80.00	0.000001	0.31	5.00	0.000019	7.57
70.00	0.000001	0.57	2.50	0.000027	10.77
60.00	0.000002	0.88	1.00	0.000039	15.67
50.00	0.000003	1.23	0.50	0.000049	19.75
40.00	0.000004	1.64	0.25	0.000062	24.97
30.00	0.000006	2.20	0.10	0.000086	34.57
20.00	0.000008	3.10			

Estimated percentile of per-capita days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.11	10.00	0.000012	4.96
80.00	0.000001	0.30	5.00	0.000019	7.55
70.00	0.000001	0.56	2.50	0.000027	10.75
60.00	0.000002	0.87	1.00	0.000039	15.65
50.00	0.000003	1.22	0.50	0.000049	19.73
40.00	0.000004	1.63	0.25	0.000062	24.95
30.00	0.000005	2.20	0.10	0.000086	34.54
20.00	0.000008	3.09			

1/ Analysis based on all three-day participant records in CSFII 1989-92 survey.

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day

All infants (<1 year) Daily Exposure Analysis
 (mg/kg body-weight/day)
 per Capita per User

	per Capita	per User
Mean	0.000006	0.000007
Standard Deviation	0.000010	0.000011
Percent of aRfD	2.21	2.78

Percent of Person-Days that are User-Days = 79.48%

Estimated percentile of user-days exceeding calculated exposure
 in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.09	10.00	0.000016	6.39
80.00	0.000001	0.54	5.00	0.000025	10.16
70.00	0.000002	0.94	2.50	0.000032	12.60
60.00	0.000003	1.11	1.00	0.000051	20.51
50.00	0.000003	1.32	0.50	0.000081	32.60
40.00	0.000004	1.71	0.25	0.000099	39.78
30.00	0.000006	2.45	0.10	0.000112	44.67
20.00	0.000011	4.44			

Estimated percentile of per-capita days exceeding calculated exposure
 in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.00	10.00	0.000015	5.88
80.00	0.000000	0.00	5.00	0.000023	9.19
70.00	0.000000	0.18	2.50	0.000030	11.97
60.00	0.000002	0.72	1.00	0.000048	19.15
50.00	0.000003	1.06	0.50	0.000074	29.48
40.00	0.000003	1.32	0.25	0.000095	37.93
30.00	0.000005	1.88	0.10	0.000110	43.83
20.00	0.000009	3.41			

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day
 =====

Nursing infants (<1 year)		Daily Exposure Analysis (mg/kg body-weight/day)	
		per Capita	per User
Mean		0.000002	0.000006
Standard Deviation		0.000006	0.000009
Percent of aRfD		0.85	2.44

Percent of Person-Days that are User-Days = 34.83%

Estimated percentile of user-days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.06	10.00	0.000016	6.37
80.00	0.000001	0.23	5.00	0.000023	9.26
70.00	0.000001	0.47	2.50	0.000028	11.18
60.00	0.000002	0.83	1.00	0.000041	16.51
50.00	0.000003	1.09	0.50	0.000043	17.38
40.00	0.000003	1.38	0.25	0.000045	17.81
30.00	0.000007	2.61	0.10	0.000057	22.98
20.00	0.000009	3.53			

Estimated percentile of per-capita days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.00	10.00	0.000007	2.73
80.00	0.000000	0.00	5.00	0.000013	5.14
70.00	0.000000	0.00	2.50	0.000020	8.00
60.00	0.000000	0.00	1.00	0.000027	10.90
50.00	0.000000	0.00	0.50	0.000037	14.97
40.00	0.000000	0.00	0.25	0.000043	17.00
30.00	0.000000	0.12	0.10	0.000044	17.74
20.00	0.000002	0.89			

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day
 =====

Non-nursing infants (<1 yr)	Daily Exposure Analysis (mg/kg body-weight/day)	
	per Capita	per User
Mean	0.000007	0.000007
Standard Deviation	0.000011	0.000011
Percent of aRfD	2.78	2.83

Percent of Person-Days that are User-Days = 98.27%

Estimated percentile of user-days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.09	10.00	0.000017	6.65
80.00	0.000002	0.64	5.00	0.000027	10.90
70.00	0.000002	0.98	2.50	0.000033	13.33
60.00	0.000003	1.16	1.00	0.000055	22.00
50.00	0.000003	1.39	0.50	0.000087	34.77
40.00	0.000004	1.69	0.25	0.000096	38.42
30.00	0.000006	2.44	0.10	0.000107	42.72
20.00	0.000011	4.27			

Estimated percentile of per-capita days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.08	10.00	0.000017	6.61
80.00	0.000001	0.56	5.00	0.000027	10.82
70.00	0.000002	0.93	2.50	0.000033	13.29
60.00	0.000003	1.14	1.00	0.000055	21.90
50.00	0.000003	1.37	0.50	0.000086	34.54
40.00	0.000004	1.67	0.25	0.000096	38.35
30.00	0.000006	2.40	0.10	0.000107	42.67
20.00	0.000011	4.20			

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day

Ver. 6.27

(1989-92 data)

Adjustment factor #2 used.

Children (1-6 years)		Daily Exposure Analysis (mg/kg body-weight/day)	
		per Capita	per User
Mean	0.000009	0.000009	
Standard Deviation	0.000015	0.000015	
Percent of aRfD	3.75	3.75	

Percent of Person-Days that are User-Days = 99.90%

Estimated percentile of user-days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000001	0.46	10.00	0.000019	7.56
80.00	0.000002	0.80	5.00	0.000028	11.19
70.00	0.000003	1.31	2.50	0.000040	16.10
60.00	0.000005	1.85	1.00	0.000066	26.38
50.00	0.000006	2.42	0.50	0.000089	35.69
40.00	0.000008	3.07	0.25	0.000119	47.54
30.00	0.000010	3.86	0.10	0.000176	70.31
20.00	0.000013	5.10			

Estimated percentile of per-capita days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000001	0.46	10.00	0.000019	7.56
80.00	0.000002	0.80	5.00	0.000028	11.19
70.00	0.000003	1.30	2.50	0.000040	16.10
60.00	0.000005	1.84	1.00	0.000066	26.38
50.00	0.000006	2.41	0.50	0.000089	35.68
40.00	0.000008	3.07	0.25	0.000119	47.52
30.00	0.000010	3.86	0.10	0.000176	70.30
20.00	0.000013	5.10			

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day

Children (7-12 years) Daily Exposure Analysis
 (mg/kg body-weight/day)
 per Capita per User

	Mean	0.000007	0.000007
	Standard Deviation	0.000009	0.000009
	Percent of aRfD	2.82	2.82

Percent of Person-Days that are User-Days = 99.98%

Estimated percentile of user-days exceeding calculated exposure
 in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000001	0.28	10.00	0.000015	6.18
80.00	0.000001	0.54	5.00	0.000023	9.33
70.00	0.000002	0.92	2.50	0.000034	13.52
60.00	0.000003	1.29	1.00	0.000044	17.70
50.00	0.000004	1.76	0.50	0.000055	22.07
40.00	0.000006	2.30	0.25	0.000069	27.42
30.00	0.000007	2.96	0.10	0.000084	33.68
20.00	0.000010	3.99			

Estimated percentile of per-capita days exceeding calculated exposure
 in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000001	0.28	10.00	0.000015	6.18
80.00	0.000001	0.54	5.00	0.000023	9.33
70.00	0.000002	0.92	2.50	0.000034	13.52
60.00	0.000003	1.29	1.00	0.000044	17.70
50.00	0.000004	1.76	0.50	0.000055	22.07
40.00	0.000006	2.29	0.25	0.000069	27.42
30.00	0.000007	2.96	0.10	0.000084	33.68
20.00	0.000010	3.98			

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day
 =====

Females (13+/preg/not nsg)	Daily Exposure Analysis (mg/kg body-weight/day)	
	per Capita	per User
Mean	0.000004	0.000004
Standard Deviation	0.000005	0.000005
Percent of aRfD	1.53	1.53

Percent of Person-Days that are User-Days =100.00%

Estimated percentile of user-days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.10	10.00	0.000008	3.33
80.00	0.000001	0.22	5.00	0.000012	4.69
70.00	0.000001	0.43	2.50	0.000017	6.66
60.00	0.000002	0.70	1.00	0.000026	10.36
50.00	0.000002	0.97	0.50	0.000035	13.90
40.00	0.000003	1.27	0.25	0.000041	16.43
30.00	0.000004	1.69	0.10	0.000053	21.02
20.00	0.000006	2.28			

Estimated percentile of per-capita days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.10	10.00	0.000008	3.33
80.00	0.000001	0.22	5.00	0.000012	4.69
70.00	0.000001	0.43	2.50	0.000017	6.66
60.00	0.000002	0.70	1.00	0.000026	10.36
50.00	0.000002	0.97	0.50	0.000035	13.90
40.00	0.000003	1.27	0.25	0.000041	16.43
30.00	0.000004	1.69	0.10	0.000053	21.02
20.00	0.000006	2.28			

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day
 =====

Females (13+/nursing)	Daily Exposure Analysis (mg/kg body-weight/day)	
	per Capita	per User
Mean	0.000006	0.000006
Standard Deviation	0.000009	0.000009
Percent of aRfD	2.31	2.31

Percent of Person-Days that are User-Days =100.00%

Estimated percentile of user-days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.18	10.00	0.000013	5.37
80.00	0.000001	0.44	5.00	0.000022	8.94
70.00	0.000002	0.62	2.50	0.000028	11.28
60.00	0.000002	0.95	1.00	0.000043	17.32
50.00	0.000003	1.22	0.50	0.000057	22.70
40.00	0.000004	1.65	0.25	0.000085	33.90
30.00	0.000005	2.13	0.10	0.000095	38.16
20.00	0.000008	3.09			

Estimated percentile of per-capita days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.18	10.00	0.000013	5.37
80.00	0.000001	0.44	5.00	0.000022	8.94
70.00	0.000002	0.62	2.50	0.000028	11.28
60.00	0.000002	0.95	1.00	0.000043	17.32
50.00	0.000003	1.22	0.50	0.000057	22.70
40.00	0.000004	1.65	0.25	0.000085	33.90
30.00	0.000005	2.13	0.10	0.000095	38.16
20.00	0.000008	3.09			

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day
 =====

Females (13-19 yrs/np/nn)	Daily Exposure Analysis (mg/kg body-weight/day)	
	per Capita	per User
Mean	0.000004	0.000004
Standard Deviation	0.000006	0.000006
Percent of aRfD	1.67	1.68

Percent of Person-Days that are User-Days = 99.69%

Estimated percentile of user-days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.11	10.00	0.000009	3.70
80.00	0.000001	0.25	5.00	0.000014	5.50
70.00	0.000001	0.46	2.50	0.000021	8.36
60.00	0.000002	0.68	1.00	0.000032	12.68
50.00	0.000002	0.96	0.50	0.000040	15.89
40.00	0.000003	1.34	0.25	0.000047	18.79
30.00	0.000004	1.76	0.10	0.000059	23.56
20.00	0.000006	2.38			

Estimated percentile of per-capita days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.11	10.00	0.000009	3.69
80.00	0.000001	0.24	5.00	0.000014	5.50
70.00	0.000001	0.46	2.50	0.000021	8.35
60.00	0.000002	0.67	1.00	0.000032	12.67
50.00	0.000002	0.95	0.50	0.000040	15.88
40.00	0.000003	1.33	0.25	0.000047	18.79
30.00	0.000004	1.75	0.10	0.000059	23.55
20.00	0.000006	2.37			

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day

Females (20+ years/np/nn) Daily Exposure Analysis
 (mg/kg body-weight/day)
 per Capita per User

	Mean	0.000004	0.000004
	Standard Deviation	0.000007	0.000007
	Percent of aRfD	1.70	1.71

Percent of Person-Days that are User-Days = 99.63%

Estimated percentile of user-days exceeding calculated exposure
 in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.07	10.00	0.000010	3.86
80.00	0.000000	0.19	5.00	0.000015	6.03
70.00	0.000001	0.38	2.50	0.000022	8.91
60.00	0.000002	0.62	1.00	0.000034	13.76
50.00	0.000002	0.93	0.50	0.000043	17.31
40.00	0.000003	1.28	0.25	0.000054	21.46
30.00	0.000004	1.71	0.10	0.000069	27.70
20.00	0.000006	2.40			

Estimated percentile of per-capita days exceeding calculated exposure
 in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.07	10.00	0.000010	3.85
80.00	0.000000	0.18	5.00	0.000015	6.03
70.00	0.000001	0.38	2.50	0.000022	8.90
60.00	0.000002	0.62	1.00	0.000034	13.75
50.00	0.000002	0.92	0.50	0.000043	17.30
40.00	0.000003	1.27	0.25	0.000054	21.45
30.00	0.000004	1.71	0.10	0.000069	27.68
20.00	0.000006	2.39			

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day
 =====

Females (13-50 years)	Daily Exposure Analysis (mg/kg body-weight/day)	
	per Capita	per User
Mean	0.000004	0.000004
Standard Deviation	0.000007	0.000007
Percent of aRfD	1.71	1.71

Percent of Person-Days that are User-Days = 99.63%

Estimated percentile of user-days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.08	10.00	0.000010	3.83
80.00	0.000001	0.21	5.00	0.000014	5.78
70.00	0.000001	0.42	2.50	0.000021	8.59
60.00	0.000002	0.66	1.00	0.000034	13.55
50.00	0.000002	0.97	0.50	0.000043	17.02
40.00	0.000003	1.31	0.25	0.000054	21.77
30.00	0.000004	1.75	0.10	0.000068	27.05
20.00	0.000006	2.44			

Estimated percentile of per-capita days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.08	10.00	0.000010	3.82
80.00	0.000001	0.20	5.00	0.000014	5.78
70.00	0.000001	0.41	2.50	0.000021	8.58
60.00	0.000002	0.66	1.00	0.000034	13.54
50.00	0.000002	0.96	0.50	0.000043	17.01
40.00	0.000003	1.31	0.25	0.000054	21.75
30.00	0.000004	1.75	0.10	0.000068	27.03
20.00	0.000006	2.44			

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day
 =====

Males (13-19 years) Daily Exposure Analysis
 (mg/kg body-weight/day)
 per Capita per User

 Mean 0.000004 0.000004
 Standard Deviation 0.000005 0.000005
 Percent of aRfD 1.74 1.74

Percent of Person-Days that are User-Days = 99.94%

Estimated percentile of user-days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.15	10.00	0.000009	3.61
80.00	0.000001	0.40	5.00	0.000013	5.06
70.00	0.000002	0.68	2.50	0.000016	6.54
60.00	0.000002	0.97	1.00	0.000024	9.63
50.00	0.000003	1.25	0.50	0.000030	12.04
40.00	0.000004	1.60	0.25	0.000038	15.19
30.00	0.000005	2.09	0.10	0.000048	19.11
20.00	0.000006	2.60			

Estimated percentile of per-capita days exceeding calculated exposure
in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.15	10.00	0.000009	3.61
80.00	0.000001	0.40	5.00	0.000013	5.06
70.00	0.000002	0.68	2.50	0.000016	6.54
60.00	0.000002	0.97	1.00	0.000024	9.63
50.00	0.000003	1.25	0.50	0.000030	12.04
40.00	0.000004	1.60	0.25	0.000038	15.18
30.00	0.000005	2.09	0.10	0.000048	19.11
20.00	0.000006	2.60			

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day

Males (20+ years) Daily Exposure Analysis
 (mg/kg body-weight/day)
 per Capita per User

	Mean	0.000005	0.000005
Standard Deviation	0.000008	0.000008	
Percent of aRfD	2.17	2.18	

Percent of Person-Days that are User-Days = 99.80%

Estimated percentile of user-days exceeding calculated exposure
 in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.11	10.00	0.000013	5.07
80.00	0.000001	0.32	5.00	0.000020	7.84
70.00	0.000002	0.60	2.50	0.000027	10.82
60.00	0.000002	0.93	1.00	0.000037	14.89
50.00	0.000003	1.27	0.50	0.000046	18.49
40.00	0.000004	1.66	0.25	0.000055	22.03
30.00	0.000006	2.21	0.10	0.000070	28.11
20.00	0.000008	3.14			

Estimated percentile of per-capita days exceeding calculated exposure
 in mg/kg body-wt/day and corresponding percent of aRfD

Percentile	Exposure	% aRfD	Percentile	Exposure	% aRfD
90.00	0.000000	0.11	10.00	0.000013	5.07
80.00	0.000001	0.32	5.00	0.000020	7.83
70.00	0.000002	0.60	2.50	0.000027	10.81
60.00	0.000002	0.93	1.00	0.000037	14.89
50.00	0.000003	1.27	0.50	0.000046	18.48
40.00	0.000004	1.66	0.25	0.000055	22.02
30.00	0.000006	2.21	0.10	0.000070	28.11
20.00	0.000008	3.14			

U.S. Environmental Protection Agency
 DEEM ACUTE analysis for AVERMECTIN
 Residue file name: 122804a2.R91
 Analysis Date: 02-22-1999/12:42:05 Residue file dated: 02-17-1999/09:01:18/8
 Acute Reference Dose (aRfD) = 0.000250 mg/kg body-wt/day
 MC iterations = 1000 MC list in residue file MC seed = 0
 =====

Summary calculations:

	95th Percentile Exposure	% aRfD	99th Percentile Exposure	% aRfD	99.9 Percentile Exposure	% aRfD
U.S. pop - all seasons:						
	0.000019	7.55	0.000039	15.65	0.000086	34.54
All infants (<1 year):						
	0.000023	9.19	0.000048	19.15	0.000110	43.83
Nursing infants (<1 year):						
	0.000013	5.14	0.000027	10.90	0.000044	17.74
Non-nursing infants (<1 yr):						
	0.000027	10.82	0.000055	21.90	0.000107	42.67
Children (1-6 years):						
	0.000028	11.19	0.000066	26.38	0.000176	70.30
Children (7-12 years):						
	0.000023	9.33	0.000044	17.70	0.000084	33.68
Females (13+/preg/not nsg):						
	0.000012	4.69	0.000026	10.36	0.000053	21.02
Females (13+/nursing):						
	0.000022	8.94	0.000043	17.32	0.000095	38.16
Females (13-19 yrs/np/nn):						
	0.000014	5.50	0.000032	12.67	0.000059	23.55
Females (20+ years/np/nn):						
	0.000015	6.03	0.000034	13.75	0.000069	27.68
Females (13-50 years):						
	0.000014	5.78	0.000034	13.54	0.000068	27.03
Males (13-19 years):						
	0.000013	5.06	0.000024	9.63	0.000048	19.11
Males (20+ years):						
	0.000020	7.83	0.000037	14.89	0.000070	28.11

Attachment 5

FILENAME: C:\Novigen\resdata\122804c\122804.r91
 CHEMICAL NAME: Avermectin
 RfD(CHRONIC): .000120 mg/kg/DAY NOEL(CHRONIC): .000000 mg/kg/day
 RfD(ACUTE): .000250 mg/kg/DAY NOEL(ACUTE): .000000 mg/kg/day Q*=.0000
 Date created/last modified: 02-03-1999/12:29:37/8 Program ver. 6.16

Food Crop Code	Crop Grp	Food Name	RESIDUE (ppm)	RDF #	Adj.Factors #1 #2	Comment
040	R	ALMONDS Full comment: 1F3973	000.001250	01.000	01.000	1F397
377	L	APPLES-JUICE-CONCENTRATE Full comment: 4F4345	000.000200	03.000	00.061	4F434
053	L	APPLES-DRIED Full comment: 4F4345	000.013000	01.000	00.061	4F434
054	L	APPLES-JUICE/CIDER Full comment: 4F4345	000.000200	01.000	00.061	4F434
052	L	APPLES Full comment: 4F4345	000.003000	01.000	00.061	4F434
070	A	AVOCADOS Full comment: 99CA008	000.020000	01.000	01.000	99CA0
116	S	BASIL Full comment: exp 9/30/98 97CA057	000.050000	01.000	01.000	exp 9/
324	U	BEEF-FAT W/O BONES Full comment: exp 9/99 8F3592	000.006000	01.000	01.000	exp 9/
325	U	BEEF-KIDNEY Full comment: exp 9/99 8F3592	000.002000	01.000	01.000	exp 9/
326	U	BEEF-LIVER Full comment: exp 9/99 8F3592	000.008000	01.000	01.000	exp 9/
327	U	BEEF-LEAN(FAT/FREE)W/O BONES Full comment: exp 9/99 8F3592	000.002000	01.000	01.000	exp 9/
322	U	BEEF-OTHER ORGAN MEATS Full comment: exp 9/99 8F3592	000.008000	01.000	01.000	exp 9/
323	U	BEEF-DRIED Full comment: exp 9/99 8F3592	000.002000	01.920	01.000	exp 9/
321	U	BEEF-MEAT BYPRODUCTS Full comment: exp 9/99 8F3592	000.008000	01.000	01.000	exp 9/
152	J	BITTER MELON Full comment: 4F4354	000.001300	01.000	00.047	4F435
143	J	CASABAS Full comment: 4F4354	000.001300	01.000	00.047	4F435
199	B	CELERIAC Full comment: exp 1/31/00 97CA027	000.001100	01.000	01.000	exp 1/
384	E	CELERY JUICE Full comment: 8F3649	000.011000	01.000	00.600	8F36
166	E	CELERY Full comment: 8F3649	000.011000	01.000	00.600	8F36
386	J	CHRISTOPHINE Full comment: 4F4354	000.001300	01.000	01.000	4F435
020	K	CITRUS CITRON Full comment: exp 9/99 8F3592	000.000850	01.000	00.632	exp 9
290	A	COTTONSEED-OIL Full comment: exp 9/99 8F3592	000.000200	01.000	00.048	exp 9/
291	A	COTTONSEED-MEAL Full comment: exp 9/99 8F3592	000.000500	01.000	00.048	exp 9/
144	J	CRENSHAWNS Full comment: 4F4354	000.001300	01.000	00.047	4F435
148	J	CUCUMBERS Full comment: 4F4354	000.001300	01.000	01.000	4F435
179	S	FENNEL Full comment: 8F3649	000.011000	01.000	01.000	8F364
023	K	GRAPEFRUIT-JUICE Full comment: exp 9/99 8F3592	000.008500	01.000	00.609	exp 9
448	K	GRAPEFRUIT PEEL Full comment: exp 9/99 8F3592	000.008500	01.000	00.609	exp 9
441	K	GRAPEFRUIT-JUICE-CONCENTRATE Full comment: exp 9/99 8F3592	000.008500	03.930	00.609	exp 9
022	K	GRAPEFRUIT-PEELED FRUIT Full comment: 8F3649	000.005000	01.000	00.609	exp 9

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	Full comment: exp 9/99 8F3592			
392	A GRAPES-JUICE-CONCENTRATE	000.020000	03.000 00.002	7F484
	Full comment: 7F4844			
315	A GRAPES-WINE AND SHERRY	000.020000	01.000 00.002	7F484
	Full comment: 7F4844			
195	A GRAPES-LEAVES	000.020000	01.000 00.002	7F484
	Full comment: 7F4844			
015	A GRAPES-JUICE	000.020000	01.000 00.002	7F484
	Full comment: 7F4844			
014	A GRAPES-RAISINS	000.020000	01.000 00.002	7F484
	Full comment: 7F4844			
013	A GRAPES	000.020000	01.000 00.002	7F484
	Full comment: 7F4844			
125	A HOPS	000.500000	01.000 01.000	exp 9/
	Full comment: exp 9/1/99 4E4419			
024	K KUMQUATS	000.004000	01.000 00.632	exp 9
	Full comment: exp 9/99 8F3592			
442	K LEMONS-JUICE-CONCENTRATE	000.000250	05.700 00.344	exp 9
	Full comment: exp 9/99 8F3592			
026	K LEMONS-PEELED FRUIT	000.000500	01.000 00.344	exp 9
	Full comment: exp 9/99 8F3592			
027	K LEMONS-PEEL	000.002500	01.000 00.344	exp 9
	Full comment: exp 9/99 8F3592			
028	K LEMONS-JUICE	000.000250	01.000 00.344	exp 9
	Full comment: exp 9/99 8F3592			
176	E LETTUCE-LEAFY VARIETIES	000.009000	01.000 00.185	4F437
	Full comment: 4F4373			
192	E LETTUCE-HEAD VARIETIES	000.009000	01.000 00.280	4F437
	Full comment: 4F4373			
182	E LETTUCE-UNSPECIFIED	000.009000	01.000 00.185	4F437
	Full comment: 4F4373			
032	K LIMES-JUICE	000.000250	01.000 00.632	exp 9
	Full comment: exp 9/99 8F3592			
030	K LIMES-PEELED FRUIT	000.000500	01.000 00.632	exp 9
	Full comment: exp 9/99 8F3592			
443	K LIMES-JUICE-CONCENTRATE	000.000250	03.000 00.632	exp 9
	Full comment: exp 9/99 8F3592			
031	K LIMES-PEEL	000.002500	01.000 00.632	exp 9
	Full comment: exp 9/99 8F3592			
146	J MELONS-PERSIAN	000.001300	01.000 00.047	4F435
	Full comment: 4F4354			
145	J MELONS-HONEYDEW	000.001300	01.000 00.047	4F435
	Full comment: 4F4354			
141	J MELONS-CANTALOUPES-JUICE	000.001300	01.000 00.047	4F435
	Full comment: 4F4354			
142	J MELONS-CANTALOUPES-PULP	000.001300	01.000 00.047	4F435
	Full comment: 4F4354			
319	X MILK-FAT SOLIDS	000.001000	01.000 01.000	exp 9/
	Full comment: exp 9/99 8F3592			
320	X MILK SUGAR (LACTOSE)	000.000250	01.000 01.000	exp 9/
	Full comment: exp 9/99 8F3592			
318	X MILK-NONFAT SOLIDS	000.001000	01.000 01.000	exp 9/
	Full comment: exp 9/99 8F3592			
033	K ORANGES-JUICE-CONCENTRATE	000.001000	03.720 00.363	exp 9
	Full comment: exp 9/99 8F3592			
035	K ORANGES-PEEL	000.010000	01.000 00.363	exp 9
	Full comment: exp 9/99 8F3592			
034	K ORANGES-PEELED FRUIT	000.002000	01.000 00.363	exp 9
	Full comment: exp 9/99 8F3592			
036	K ORANGES-JUICE	000.001000	01.000 00.363	exp 9
	Full comment: exp 9/99 8F3592			
139	I PAPRIKA	000.020000	01.000 01.000	7F484
	Full comment: 7F4844			
404	L PEARS-JUICE	000.008000	01.000 00.743	1F378
	Full comment: 1F3787			
057	L PEARS-DRIED	000.035000	01.000 00.743	1F378
	Full comment: 1F3787			
056	L PEARS	000.008000	01.000 00.743	1F378
	Full comment: 1F3787			
156	I PEPPERS-CHILLI INCL JALAPENO	000.020000	01.000 00.152	7F484
	Full comment: 7F4844			

157	I PEPPERS-OTHER Full comment: 7F4844	000.020000	01.000 00.152	7F484
155	I PEPPERS-SWEET(GARDEN) Full comment: 7F4844	000.020000	01.000 00.152	7F484
158	I PIMENTOS Full comment: 1E3943	000.020000	01.000 00.152	1E394
211	B POTATOES/WHITE-PEEL ONLY Full comment: exp 9/1/99 5F4508	000.000250	01.000 00.046	exp 9/
208	B POTATOES/WHITE-UNSPECIFIED Full comment: exp 9/1/99 5F4508	000.002000	01.000 00.046	exp 9/
207	B POTATOES/WHITE-WHOLE Full comment: exp 9/1/99 5F4508	000.000250	01.000 00.046	exp 9/
209	B POTATOES/WHITE-PEELED Full comment: exp 9/1/99 5F4508	000.000250	01.000 00.046	exp 9/
210	B POTATOES/WHITE-DRY Full comment: exp 9/1/99 5F4508	000.001200	06.500 00.046	exp 9/
149	J PUMPKIN Full comment: 4F4354	000.001300	01.000 01.000	4F435
186	E SPINACH Full comment: exp 1/31/00 97CA005	000.050000	01.000 00.176	exp 1/
415	J SQUASH-SPAGHETTI Full comment: 4F4354	000.001300	01.000 01.000	4F435
151	J SQUASH-WINTER Full comment: 4F4354	000.001300	01.000 01.000	4F435
150	J SQUASH-SUMMER Full comment: 4F4354	000.001300	01.000 01.000	4F435
416	A STRAWBERRIES-JUICE Full comment: 0F3880	000.004000	01.000 00.464	0F388
017	A STRAWBERRIES Full comment: 0F3880	000.004000	01.000 00.464	0F388
037	K TANGELOS Full comment: exp 9/99 8F3592	000.001000	01.000 01.000	exp 9
420	K TANGERINES-JUICE-CONCENTRATE Full comment: exp 9/99 8F3592	000.001000	03.200 00.745	exp 9
039	K TANGERINES-JUICE Full comment: exp 9/99 8F3592	000.001000	01.000 01.000	exp 9
038	K TANGERINES Full comment: exp 9/99 8F3592	000.001000	01.000 01.000	exp 9
159	I TOMATOES-WHOLE Full comment: 1E3943	000.002000	01.000 00.396	1E394
423	I TOMATOES-DRIED Full comment: 1E3943	000.002000	14.300 00.081	1E394
160	I TOMATOES-JUICE Full comment: 9F3703	000.000400	01.000 00.081	9F370
162	I TOMATOES-PASTE Full comment: 9F3703	000.002400	01.000 00.081	9F370
163	I TOMATOES-CATSUP Full comment: 9F3703	000.002200	01.000 00.081	9F370
161	I TOMATOES-PUREE Full comment: 9F3703	000.000800	01.000 00.081	9F370
153	J TOWELGOURD Full comment: 4F4354	000.001300	01.000 01.000	4F435
431	R WALNUT OIL Full comment: 1F3973	000.001250	01.000 01.000	1F397
048	R WALNUTS Full comment: 1F3973	000.001250	01.000 01.000	1F397
436	J WATERMELON-JUICE Full comment: 4F4354	000.001300	01.000 00.047	4F435
147	J WATERMELON Full comment: 4F4354	000.001300	01.000 00.047	4F435
439	J WINTERMELON Full comment: 4F4354	000.001300	01.000 00.047	4F435

Attachment 6

U.S. Environmental Protection Agency
 DEEM89N CHRONIC analysis for AVERMECTIN
 Residue file name: 122804
 Analysis Date 02-03-1999
 Reference dose (Rfd, CHRONIC) = 0.000120 mg/kg body-wt/day
 COMMENT 2: 7F4844/Cutchin-RAB2/WDC

Total exposure by population subgroup

Population Subgroup	Total Exposure	
	mg/kg body wt/day	Percent of Rfd
U.S. Pop - 48 states - all seasons	0.000008	6.8%
U.S. Population - spring season	0.000008	6.8%
U.S. Population - summer season	0.000008	6.7%
U.S. Population - autumn season	0.000008	7.1%
U.S. Population - winter season	0.000008	6.6%
Northeast region	0.000008	7.0%
Midwest region	0.000008	6.7%
Southern region	0.000008	6.3%
Western region	0.000009	7.4%
Pacific Region	0.000009	7.3%
Hispanics	0.000008	6.9%
Non-hispanic whites	0.000008	6.8%
Non-hispanic blacks	0.000008	6.4%
Non-hispanic other than black or white	0.000008	7.0%
All infants (<1 year)	0.000018	15.2%
Nursing infants (<1 year)	0.000008	6.3%
Non-nursing infants (<1 year)	0.000023	19.0%
Children (1-6 years)	0.000014	12.1%
Children (7-12 years)	0.000011	8.8%
Females (13-19 yrs/not preg. or nursing)	0.000006	5.4%
Females (20+ years/not preg. or nursing)	0.000006	5.3%
Females (13-50 years)	0.000006	5.3%
Females (13+/pregnant/not nursing)	0.000006	4.8%
Females (13+/nursing)	0.000008	6.3%
Males (13-19 years)	0.000007	5.5%
Males (20+ years)	0.000008	6.4%
Seniors (55+)	0.000007	5.7%

Residue Chemistry Review

Subject: Avermectin. Acute and Chronic Dietary Risk Analysis for the Request for Tolerances on Grapes and Peppers and Section 18 on Avocados. DP Barcode: D252974.

Document

Class:

Product

Chem:

Residue 860.1550 Proposed tolerances

Chem:

Biochemicals:

DP Barcode: D252974

MRIDs:

PC Codes: Actives 122804 Abamectin (ANSI)
Inerts

Commodities: Grape; Pepper

Administrative #:

Reviewers: William D. Cutchin

Review R. A. Loranger

Approved on: February 23, 1999

Approver:



WP Document: D252974.drs

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